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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.         | CONFIRMATION NO.       |
|---|-------------|----------------------|-----------------------------|------------------------|
| 10/583,283  | 06/16/2006  | Kenichi Nakano       | 128449                      | 9809                   |
| 25944   | 7590        | 05/10/2007           |                             |                        |
| OLIFF & BERRIDGE, PLC<br>P.O. BOX 19928<br>ALEXANDRIA, VA 22320 |             |                      | EXAMINER<br>REDDY, KARUNA P |                        |
|   |             |                      | ART UNIT<br>1713            | PAPER NUMBER           |
|   |             |                      | MAIL DATE<br>05/10/2007     | DELIVERY MODE<br>PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/583,283

Applicant(s)

NAKANO ET AL.

Examiner

Karuna P. Reddy

Art Unit

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☒ Claim(s) 1 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☒ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>6/16/2006</u> . | 6) <input type="checkbox"/> Other: ____.  |

### **DETAILED ACTION**

1. It is noted that the applicant intended to claim the priority date of Japanese application (JAPAN 2003-421704). However, it is not perfected because a certified English translation has not been provided.

### ***Claim Objections***

2. Claim 1 is objected to because of the following informalities: The structure of the norbornane lactone (meth)acrylate in claim 1 is incorrect and has been confirmed by attorney James Ollif. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

4. Claims 1-5 are rejected under 35 U.S.C. 102(a) as being anticipated by Nishimura et al (US 2006/0234154 – WIPO publication WO 2004/061525 A1 is used for date purposes and the US equivalent is referred to in the rejection below)

Nishimura et al disclose a radiation sensitive resin composition comprising acid labile group containing resin with a recurring unit of the formula (I) where R<sup>1</sup> individually represents a hydrogen atom, methyl group. R<sup>2</sup> individually represents a monovalent alicyclic hydrocarbon group having 4 to 20 carbon

atoms or a linear or branched alkyl group having 1-4 carbon atoms provided at least one of  $R^2$  groups is an alicyclic hydrocarbon group (paragraph 0006-0007). Formula (I) reads on the monomer of claim 3. The acid labile group containing resin comprises preferably, in addition to the recurring unit of formula (I), at least one of the recurring units of the following formula (2). In the formula (2),  $R^1$  is the same as that defined for formula (I). In the formula (2), "A" indicates a single bond or a linear or branched alkylene group, mono or dialkylene glycol group and "B" represents a single bond or an alkylene group (paragraph 0021-0023). As preferable examples of the monomers shown by the formula (2-1), monomers of formula (2-1-3, 2-1-5 and 2-1-7) can be given and reads on the general formula (I) of claim 1. The weight average molecular weight of the acid labile group containing resin is usually 1,000 to 300,000, preferably 2,000 to 200,000 (paragraph 0098). The radiation sensitive resin composition has high transmittance of radiation, superior basic properties as a resist (paragraph 0206).

Therefore, Nishimura et al anticipates the instant invention.

5. Claims 1-5 are rejected under 35 U.S.C. 102(a) as being anticipated by Nishimura et al (JP 2004-210917).

Nishimura et al disclose a (meth)acrylic polymer high in transparency to radiation, excellent in basic properties as a resist. The (meth)acrylic polymer contains the repeating unit represented by formula (I) wherein R represents hydrogen or methyl group, A is represented by  $-(1-12 \text{ C alkylene group})-O-$ , wherein "m" represents an integer of 1-3 and an oxygen atom bonded to an

alkylene group is bonded to a norbornane ring derivative (abstract). In addition, the (meth)acrylate polymer includes a repeat unit expressed by the formula (3) wherein R is represented by hydrogen atom or methyl group and R<sup>2</sup> is represented by alkyl group of an alicyclic hydrocarbon radical having 4-20 carbon atoms or linear chain having 1-4 carbon atoms (paragraph 0006) and reads on comonomer of claim 3. In formula 1-2, "B" is an alkylene group (paragraph 0011). See formula 7 and 8 (paragraph 0012) for the general formula of claim 1. The molecular weight of acrylic polymer is usually 1,000 to 300,000, preferably 2,000 to 200,000 (paragraph 0027).

Therefore, Nishimura anticipates the instant invention.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karuna P. Reddy whose telephone number is (571) 272-6566.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through

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Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Karuna P Reddy  
Examiner  
Art Unit 1713

  
DAVID W. WU  
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